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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/441,003	11/16/1999	JOHN ABEDOR	112008-0027C	3749

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EXAMINER

NGUYEN, JOHN QUOC

ART UNIT PAPER NUMBER

3654

DATE MAILED: 02/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/441,003

Applicant(s)

ABEDOR ET AL.

Examiner

John Q. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-27 and 32-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-27 and 32-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 25. 6) ☐ Other: _____

Applicant's election with traverse of Group I, claims 1, 2, 4-27, and 32-41, in Paper No. 17 has been acknowledged.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: "mechanical device" (claim 1).

Claims 1, 2, 4-27, and 32-41 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The following appear to lack sufficient antecedent basis (in the claim): "the current Kalman filter estimate" (claim 34-36).

For clarity and definiteness, it appears that —the tape—should be inserted after "engaging" (claim 17, line 3), that "with the tape" (claim 17, line 4) should be deleted.

In claim 1, it is not clear what is the relationship between the tape leaving, the angular position, and the mechanical device?

In claim 12, it is not clear how "one reel" can have a supply reel and a take up reel (same in claim 15). Where is the movement of the tape which is measured by the third transducer? And what is the third angular position a measurement of?

In claim 9, it is not clear where the initial estimates come from?

In claim 15, it is not clear where the length of tape is located.

In claim 20, it is not clear how the amount of tape is calculated from just 2 variables.

In claim 27, steps e and f are not known (in the claim).

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In claim 34, it is not clear how a variable which is a number is related to the step of estimating (i.e. what is the relationship?). In step d, it is not clear of what is the individual measurement.

In all claims, it is not clear how the radius is calculated/estimated from just three angular position measurements, one measurement for each of three variables. Say the three measurements are 32 deg., 58 deg., and 5 deg., what is the amount of tape?

All claims should be revised carefully to correct all other deficiencies similar to the ones noted above.

Claims 1, 2, 4-27, and 32-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Hermanns et al (US 4964582) and Macchia (US 4399953).

The admitted prior art discussed on pages 2-3 of the specification discloses substantially all the claimed features including a tape system having a supply reel, a take-up reel, a capstan, tension arms, a servo system. It is also stated that "the tape pack radius is calculated from measurements of the angular positions of the reels and the capstan." and that filters have also been used. It is deemed inherent that tension arm measurements ("fourth angular positions") are included in the calculation of the amount of tape on the reel since this is old and well known in the art. Kalman filters for minimizing errors in predictive computations are old and well known as discussed by Macchia. Hermanns et al. discloses a system utilizing Kalman filters for application to winding apparatus (note column 4, lines 17-27, column 6, lines 17-20, column 7, lines 1-68, column 10, lines 41-63). In view of the prior art as a whole, it would have been obvious to a person having ordinary skill in the art to provide the admitted prior art

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apparatus with Kalman filters to minimize errors in the way that Kalman filters are known for. The minimum and maximum values and the three-sigma intervals are old and well known in the field of data and statistical analysis so that unreasonable data does not contaminate and reduce the accuracy of the analysis. The step-by-step process of collecting data points, such as when to update the data and the time interval in between, etc, would have been within the level of one of ordinary skill in the art and would have been determined through routine engineering experimentation and optimization.

Applicant's arguments filed 12/19/02 have been fully considered but they are not persuasive.

The alleged missing element "third angular position to measure an angular position of a mechanical device" reads on the measurement of the capstan in the admitted prior art.

Lines 17-27 (column 4) and 17-21 (column 6) of Hermanns et al and lines 40-44 of column 5 of Macchia teaches/suggest the use of a Kalman filter as claimed; therefore, the combination set forth is deemed obvious as noted in the rejection above. Furthermore, the admitted prior art already uses filters and both Hermanns et al and Macchia suggests the use of Kalman filters, therefore making the combination obvious to one of ordinary skill in the art.

The applicant's admitted prior art is deemed to have all the features (these features are also deemed old and well known) that applicant alleges to be missing.

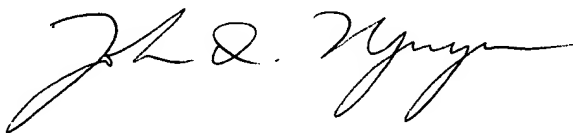
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Furthermore, it appears that applicant's arguments are directed toward each reference individually, which is not a complete response to a 35 U.S.C. Section 103 rejection because the rejection is based on a combination of references and the test for combining the references is what the disclosures, as a whole, would have fairly suggested to one having ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Q. Nguyen whose telephone number is (703) 308-2689. The examiner can normally be reached on Monday-Friday from 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Katherine Matecki, can be reached on (703) 308-2688. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9326 (before Final) and (703) 872-9327 (after Final).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-4177.

A handwritten signature in black ink, appearing to read "John Q. Nguyen". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

John Q. Nguyen
Primary Examiner
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